



THE UNITED REPUBLIC OF TANZANIA

MINISTRY OF AGRICULTURE

Kilimo 4, P.O. Box 2182, 40487 DODOMA. Telephone: +255 - Tel. No. 255-26-2320034, Fax: 255-26-2320037; Email: ps@kilimo.go.tz website: www.kilimo.go.tz

NATIONAL FOOD SECURITY BULLETIN

Volume 17-2018

www.kilimo.go.tz

31st March 2018

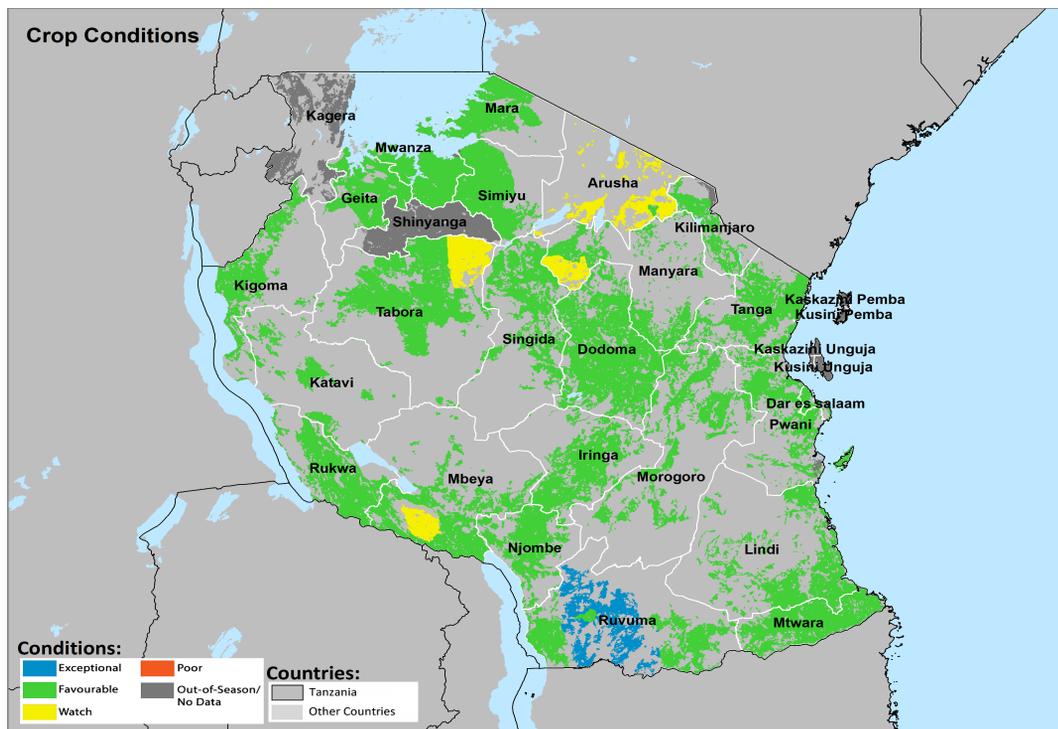


Fig.1 This crop condition map synthesizes information for all crops as of 31st March 2018. Crop conditions over the main growing areas are based on a combination of national and regional crop analyst inputs along with remote sensing data and rainfall data provided by the Tanzania Meteorological Agency.

NATIONAL HIGHLIGHTS

- Maize in bimodal regions are in different growth stages i.e vegetative, tasseling, grain filling, and a few in maturity stage where as in most of unimodal areas have already been harvested.
- Arusha, Shinyanga and Mbeya regions are still under watch conditions following fall army worm invasion.
- Njombe, Tabora, Geita and Mtwara had the highest prices for rice while Bukoba, Musoma, Nyamagana and Sumbawanga had lowest market price.
- The lowest maize prices were observed in the Sumbawanga, Songea, and Makambako markets.
- Mbeya, Temeke, Ilala and Kinondoni had the highest prices for beans, while Bukoba, Geita, Makambako, Songea and Arusha had the lowest prices.
- Rainfall situation is still promising in most of bimodal regions indicating good production.

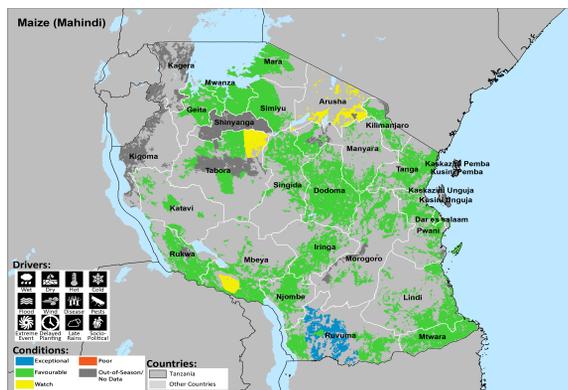
Contents

General crop conditions	1
National highlights.....	1
Crop Conditions for major food crops	2
Satellite-based crop/ vegetation conditions.....	3
TMA-Rainfall Performance Report:.....	4
Rainfall Outlook for March, 2018.....	5
Agrometeorological Outlook for April, 2018.....	6
Food prices by region:.....	8
National food availability situation:.....	9
Vulnerability.....	10
Intervention Programs.....	11
Terms and Definitions.....	12

Crop Condition Highlights For Major Food Crops

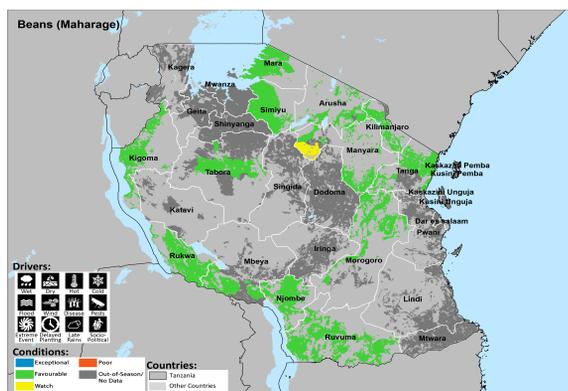
Maize

Maize crops in most of bimodal regions are in favorable condition where as in most of unimodal areas have already harvested. Maize in bimodal regions are in different growth stages i.e vegetative, tasseling, grain filling, and a few at maturity stages. Arusha, Shinyanga and Mbeya regions are still under watch conditions after fall army worm invasion. Exceptional maize conditions have been observed in Ruvuma region. Rainfall situation continues well in most of the regions in the country.



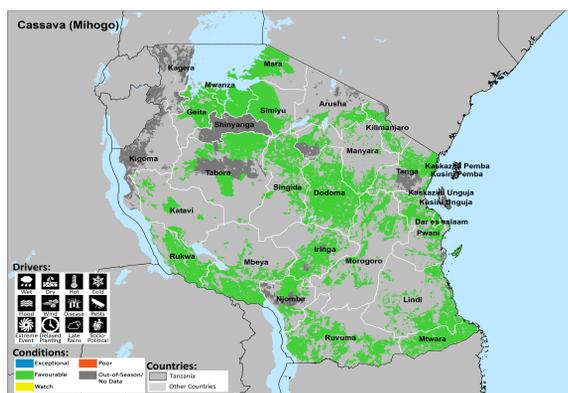
Beans

Majority of regions have already harvested the bean crop. Manyara however has experienced watch conditions due to prolonged dry spell which has greatly affected the grain filling stage.



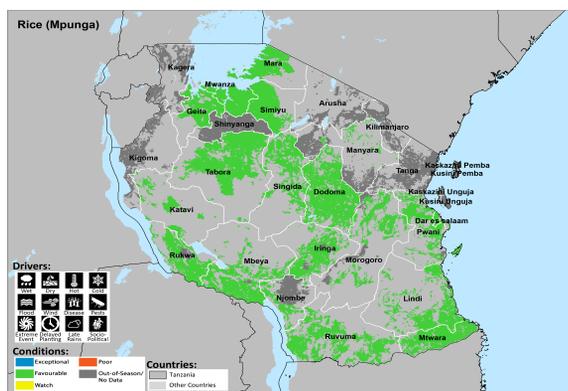
Cassava

Favorable conditions were experienced at different stages of crop growth in most of the regions.



Rice

Favorable conditions were experienced in all rice cultivating regions. However, the Quelea-quelea invasion was reported in Tanga and Shinyanga regions where aerial spray was used to control the damage.



Satellite-based crop/vegetation Conditions

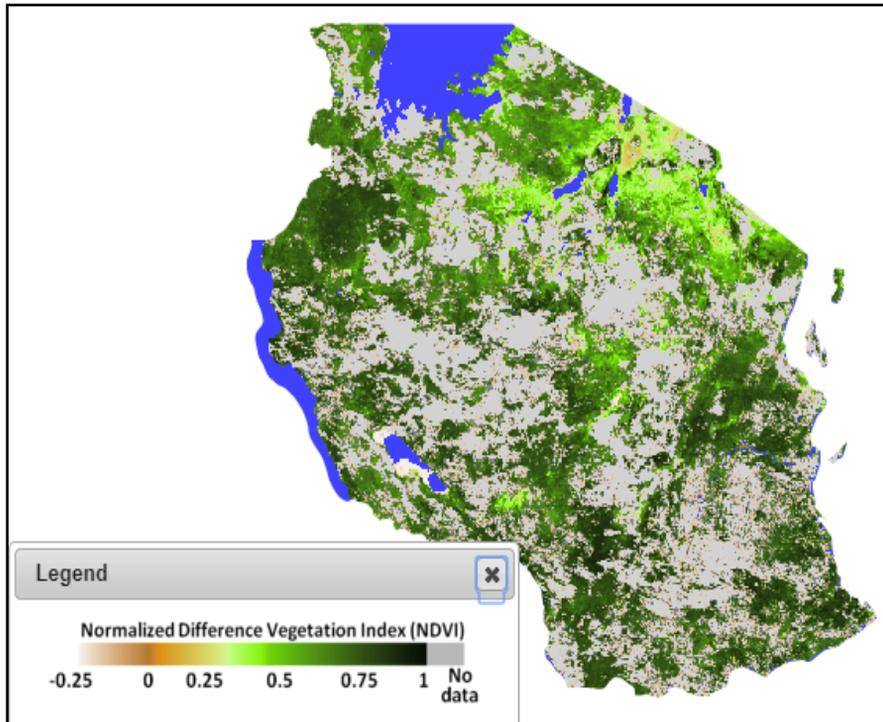


Fig.5 Normalized Difference Vegetation Index (NDVI) anomaly for 6th- 22nd March, 2018.

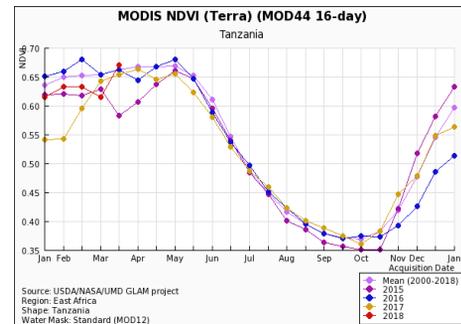


Fig.7 16 days NDVI for March, 2018 as it compares to 2015, 2016, 2017,2018 and the longterm mean. Data show NDVI values bordering average for the whole country.

Compared to the long term mean NDVI and the NDVI anomaly for 2015, 2016 and 2017, February 2018 NDVI is slightly higher than February 2015 and 2017 NDVI but is lower than the NDVI for February 2016 and the long term mean (Fig. 7).

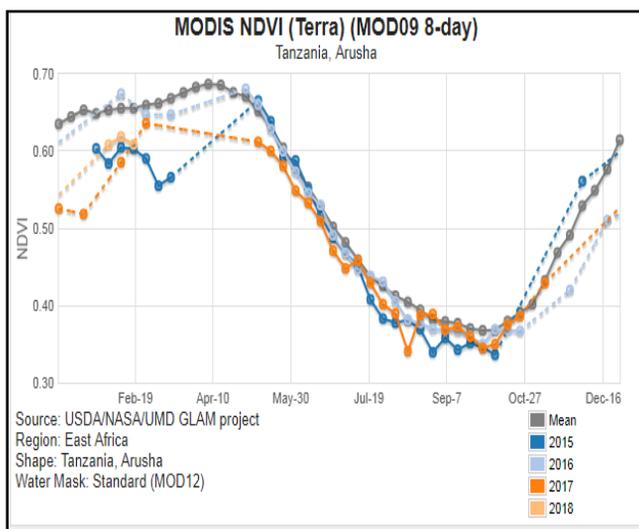


Fig.6 8 days NDVI for February, 2018 as it compares to 2015, 2016, 2017 and the longterm mean. Data show NDVI values bordering average for Arusha region.

Vegetation condition was good in many parts of the country except for some few parts of Manyara, Arusha, and Kilimanjaro which experienced below average conditions (Fig.5).

In many regions crops are in different growth stages, while beans have been harvested. In some few regions however, land preparation and planting activities are continuing in few areas.

TMA-Rainfall Performance Report

During the month, the unimodal areas continue to receive adequate rains which performed normal to above normal rainfall (greater than 75% of the long term average) as shown in Figure 1. Only few parts of southwestern Njombe and western Ruvuma performed below normal rainfall as per long term average, however it received total rainfall of 150mm and above. Meanwhile; the rains set earlier during the first week of March over most of bimodal areas except Kagera, Geita, Mwanza and Simiyu regions where it started during second dekad of March. It performed normal to above normal with extremely extraordinary situation (greater than 200% of long term average) particularly over Tanga, Kilimanjaro, Manyara and Arusha regions.

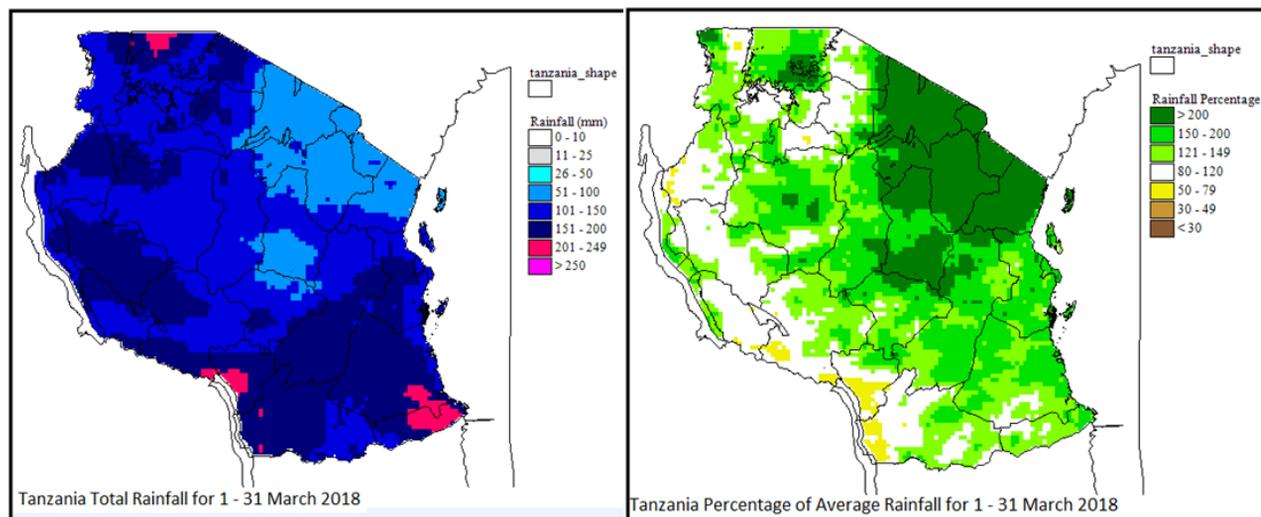


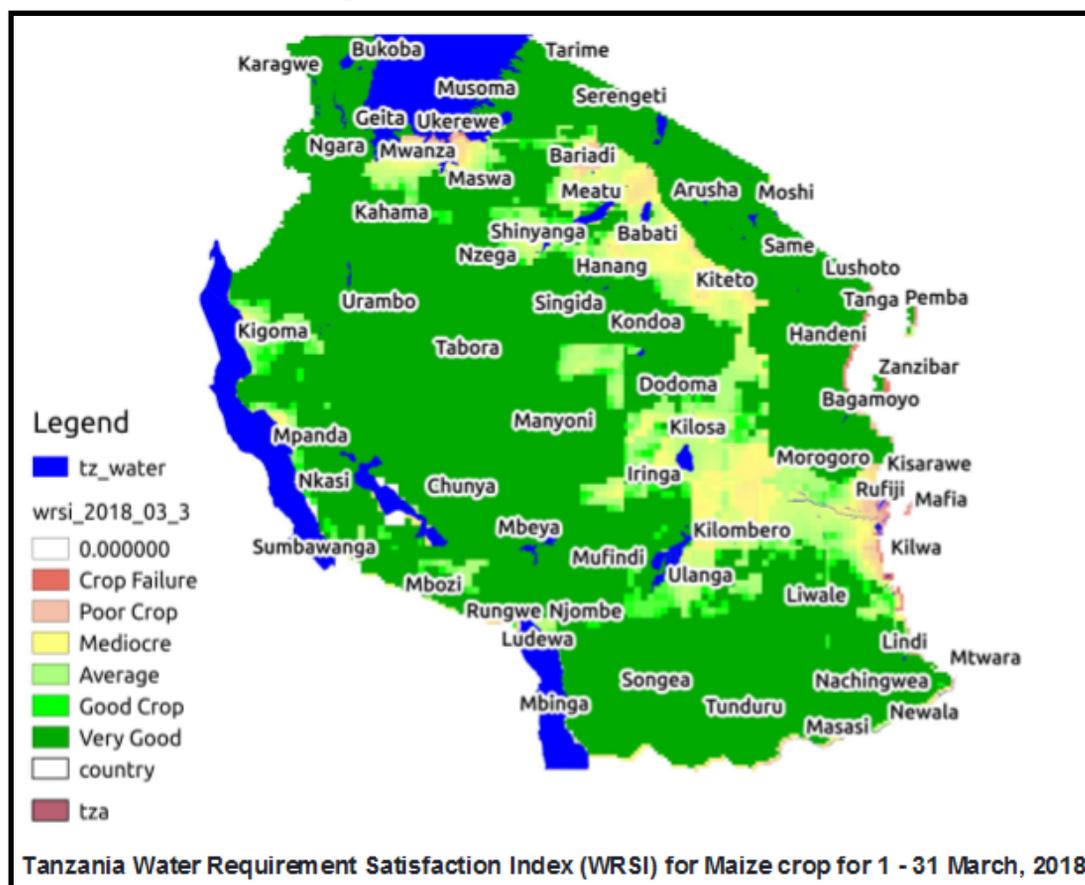
Figure 9: Tanzania Rainfall Distribution for 1 - 31 March, 2018; as total (left) and percentage of long term monthly average (right).

Agrometeorological impact during March, 2018:

During the March period, the observed rains provided favourable conditions for crops and pasture development, despite some pocket areas which had excess soil moisture and others dry conditions. Over the unimodal areas maize crop was reported to be at different stages from tasselling to wax ripeness stage specifically in Iringa, Mbeya, Rukwa, Dodoma, Singida, Tabora, Kigoma, Ruvuma and Mtwara. Farmers over these areas were mostly engaged with weeding, fertilizer application and planting of other crops such as beans and sweet potatoes.

Farmers in the bimodal areas continued with land preparation and planting especially during the first half of the time, however, harvesting of late grown vuli maize crop was reported in Mwanza, Simiyu and Shinyanga regions. During the second half farmers were mostly engaged in weeding activities where maize crop was at vegetative stage. Generally, the crops were at good condition all over the country despite the corridor from Babati and Kiteto down to Rufiji as well as some few pockets around Lake Victoria Basin as shown on Figure 2. Army worms were reported in many areas of Mara region where Serengeti was the most affected district in the region. Water and pasture availability were in good condition over much of the country.

Agrometeorological impact during March, 2018

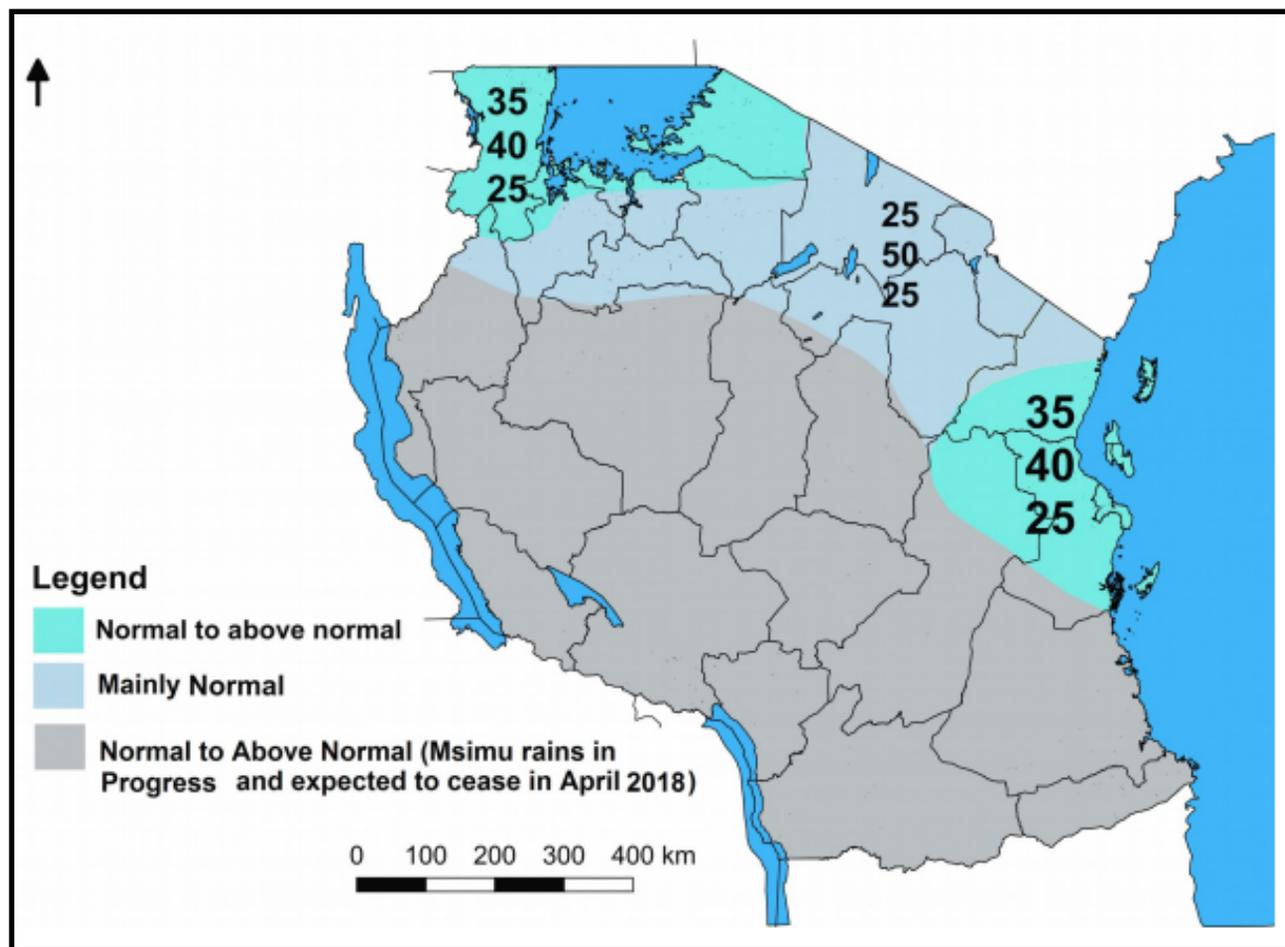


Rainfall Outlook for March, 2018:

- **Northern Coast (Tanga, Pwani, Dar es Salaam regions, northern sector of Morogoro region, Unguja and Pemba Islands):** Enhanced rainfall activities are expected during the first half of the month, followed by suppressed rains during the second half of the month.
- **North Eastern Highlands (Kilimanjaro, Arusha and Manyara regions):** Reduced rains are likely over most areas of these regions during the first half of the month, followed by enhanced rains during the second half of the month.
- **Lake Victoria basin (Kagera, Geita, Shinyanga, Mwanza, Mara and Simiyu regions):** Enhanced rains during the first and second weeks of April, followed by reduced rains during the last weeks of the month.
- **Western regions (Kigoma, Katavi and Tabora regions):** Enhanced rains during the first and second weeks of April, followed by reduced rains during the remainder of the period.
- **Central areas (Dodoma and Singida regions):** Moderate chances of normal rainfall activities during the month of April, 2018.
- **Southwestern highlands (Rukwa, Njombe, Iringa, Mbeya region and southern sector of Morogoro region):** Enhanced rains over isolated areas during the first half of the month followed by normal rains over most areas during the remaining days.
- **Southern Coast (Mtwara and Lindi regions):** Enhanced rains during the first half of the month followed by suppression during the remainder of the period.
- **Southern region (Ruvuma region):** Enhanced rains during the first half of the month followed by suppression during the remainder of the period.

Agrometeorological Outlook for April, 2018

The expected rainfall condition is likely to favour growth and development of crops and pastures. Soil moisture condition is expected to improve significantly over much of the entire country except Northeastern highlands during the first half of the month. Dry episodes are likely to favour weeding activities and pesticide application especially over bimodal areas. Water and pasture conditions are expected to improve gradually across the country. However; farmers, fishers and livestock keepers are advised to consult extension officers for optimal use of this forecast and advisory.



Lake Victoria Basin (Kagera, Mara, Mwanza, Geita, Simiyu and Shinyanga regions): Rains are expected to start during the first week of March in Mwanza region and spread to other regions of Geita, Mara, Kagera, Simiyu and Shinyanga during the second to third week of March, 2018. The rains are expected to be normal to above normal over Kagera, Mara and northern parts of Geita, Mwanza and Simiyu which are closer to the Lake Victoria. Otherwise, Shinyanga region and the southern parts of Geita, Mwanza and Simiyu regions are expected to feature mainly normal with pockets of below normal rains.

Agrometeorological Outlook for April, 2018

Northern Coast areas and its Hinterlands (Dar es Salaam, Tanga, and Coast regions, Islands of Unguja and Pemba and northern Morogoro areas): Rains are expected to commence in the first week of March, 2018. The rains are expected to be normal to above normal over Dar es Salaam and Pwani regions together with the isles of Unguja and Pemba, northern part of Morogoro and southern parts of Tanga regions. However, below normal rains are expected over northern parts of Tanga region.

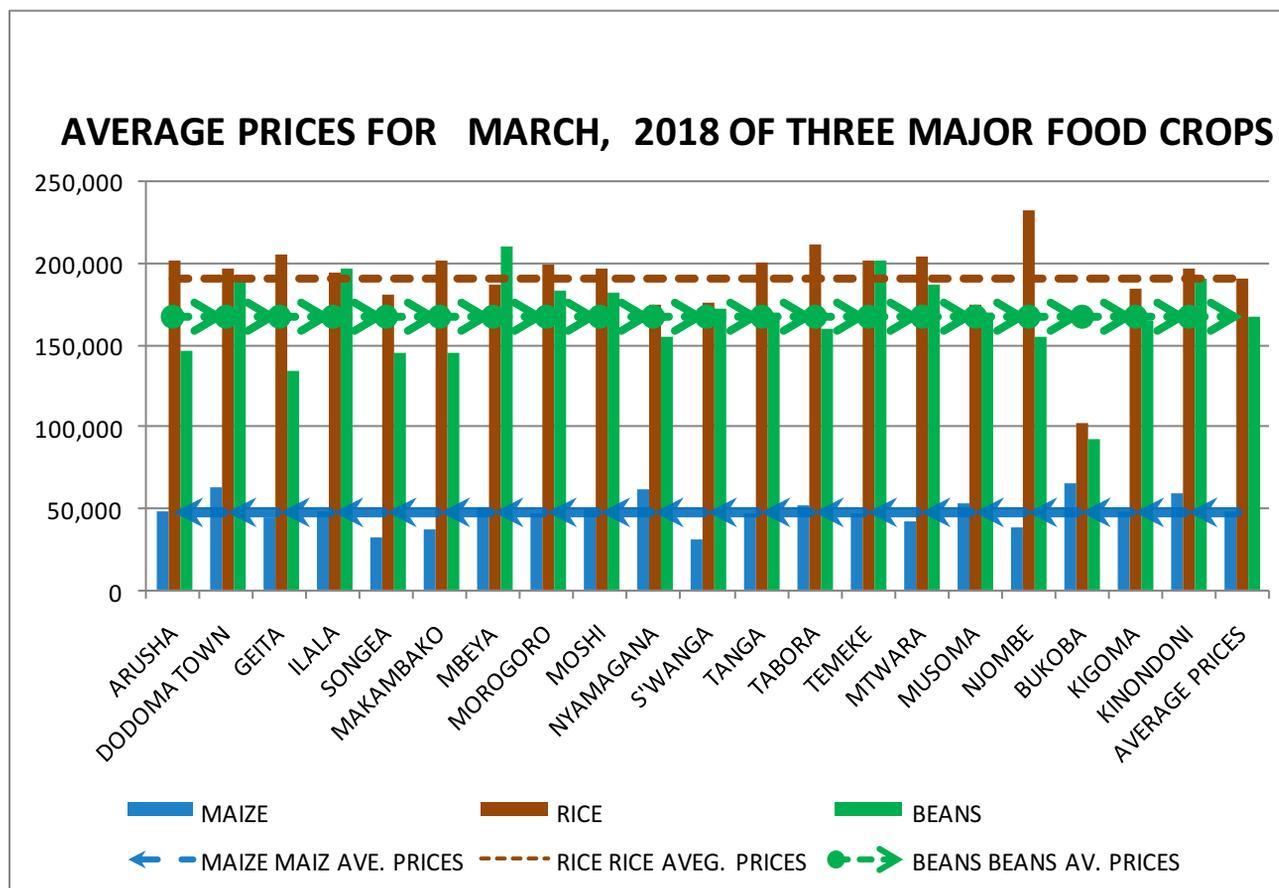
North-Eastern Highlands (Kilimanjaro, Arusha and Manyara regions): Rains are expected to start over most areas in the second week of March, 2018 and are likely to be mainly normal over most areas.

Likely impacts and advisory:

Agriculture, Food Security, Fisheries and Livestock Production Sufficient soil moisture condition is likely to feature over the northeastern highlands (Kilimanjaro, Arusha and Manyara regions), Lake Victoria basin (Kagera, Geita, Mwanza, Mara, Shinyanga, and Simiyu regions) and northern coast (Morogoro (north), Dar es Salaam, Pwani and Tanga regions, islands of Unguja and Pemba). Farmers in these areas are advised to go for normal Masika cropping season. However, the northern part of Tanga region is expected to experience periods of moisture deficit and therefore farmers are advised to plant drought tolerant and early maturing crop varieties.

Water and pastures conditions and food for fish are expected to improve due to the expected normal to above normal rainfall. However, for optimal use of this outlook, the farmers, fishers and livestock keepers are strongly advised to seek more advice from their relevant extension officers and also carry out rainwater harvesting for future use during dry periods.

Major Food Prices at Selected Markets:



The charts above display March, 2018 average market prices of major food crops in combination with Nation average price data for the selected markets. Njombe, Tabora Geita and Mtwara had the highest prices for rice ranging from 2,324/= to 2,050/= per Kg while Bukoba, Musoma, Nyamagana and Sumbawanga had lowest market prices ranging from 1,025/= to 1,757 per kg. Bukoba, Dodoma, Nyamagana and Kinondoni had above average maize price while Sumbawaga, Songea, Makambako and Njombe were all below average maize prices. However the lowest maize price were observed in the Sumbawanga market 314/=per kg, Songea market ranging from 323/= to 350 per kg and Makambako market 366/= per kg. Mbeya, Temeke, Ilala and Kinondoni had the highest prices for beans, ranging from 1,900/= to 2,100/= per kg while Bukoba, Geita, Makambako, Songea and Arusha had the lowest prices of beans ranging from 925/= to 1,470/= per kg.

National Food Availability

The table below shows 2016/17 Food Crop Production versus Requirement for the year 2017/18

CEREALS	MAIZE	SORGHUM& MILLETS	RICE	WHEAT	TOTAL CEREALS
Production	6,680,758	1,063,937	1,593,609	50,467	9,388,772
Requirement	5,407,499	1,874,229	924,435	251,396	8,457,558
Deficit (-)/ Surplus (+)	1,273,259	-810,292	669,175	-200,928	931,214
SSR (%)	124	57	172	20	111
NON-CEREALS	PULSES	BANANA	CASSAVA	POTATOES	TOTAL NON CEREALS
Production	2,317,807	844,558	1,341,755	2,007,972	6,512,092
Requirement	802,644	885,522	2,210,911	943,399	4,842,476
Deficit (-)/ Surplus (+)	1,515,163	-40,964	-869,156	1,064,573	1,669,617
SSR (%)	289	95	61	213	134
TOTAL	CEREALS	NON- CEREALS	TOTAL FOOD		
PRODUCTION	9,388,772	6,512,092	15,900,864		
REQUIREMENT	8,457,558	4,842,476	13,300,034		
DEFICIT (-)/ SURPLUS(+)	931,214	1,669,617	2,600,831		
SSR (%)	111	134	120		

Source: MALF, Preliminary Food Crop Production Forecast 2016/17

VULNERABILITY AND INTERVENTIONS

FALL ARMYWORM INVASION IN TANZANIA

The fall armyworms invasion continued to threaten different regions including the Big Six regions which are the national food basket areas. The invaded regions reported on different controlling methods that were used and some of them showed effectiveness. However, in March, three regions of Arusha, Mbeya and Singida have reported watch conditions in the maize crops due to fall armyworm destruction in the farms.



Severely impacted maize crop by Fall armyworms

RODENTS

In the month of February, most of districts in Tanga region reported massive rodents invasion in maize farms. Rodents were reported to have destroyed over 32,000 hectares of maize and various other crops putting thousands of people at serious risks of food shortage. Prospects of bumper harvests following good rains in previous months were shut after farmers realising that most of the maize in their field had turned into stalks and cobs of little use to them.

QUELEA QUELEA BIRDS

In the month of March quelea quelea birds have invaded the irrigation schemes in Korogwe district, Tanga region. *Quelea quelea* is a major pest to small grain cereal crops in much of sub-Saharan Africa, the destruction of this pest can go as far as 100 percent loss.

INTERVENTIONS

- The Government intervened by providing zinc phosphide as a rodent control which minimised the threat on food production.
- Aerial spraying was used to the areas affected by quelea quelea and also destroying the breeding site
- Fertilizer (Bulk procurement) Regulations 2017 has been put in place from this current season.

Medium to Long-Term Strategies:

- Provide training sessions on improved crop production, crop diversification as well as marketing in order to increase household income.
- Improve market linkages and accessibility through construction of roads, market infrastructures introduction of regulations for the transport of commodities, etc.
- Construction and rehabilitation of drainage systems and irrigation schemes as well as improved agricultural land management to avoid water logging.
- Promote a fully-fledged watershed management in order to reduce the associated risks of flooding of the agricultural land through - tree planting, land use management plans, riverbank maintenance, construction of dams, etc.

Terms and Definitions

MOA	Ministry of Agriculture	
NFSD	National Food Security Division	
TMA	Tanzania Metrological Agency	
RAS	Regional Administrative Secretary	
NDVI	Normalized Difference Vegetative Index. The NDVI is used to measure and monitor plant growth, vegetative cover, and biomass production.	
MODIS	Moderate resolution Imaging Spectroradiometer	
BIMODAL	Areas receiving rains twice a year. This means that the majority of precipitation falls in two distinct seasons a year i.e short rains Vuli-September to December, Long rains Masika - March to June.	
UNIMODAL	Areas receiving rains once a year Msimu rains i.e from November to April	
Conditions	Exceptional	Conditions are much better than average at time of reporting
	Favorable	Conditions range from slightly below to slightly above average at reporting time
	Watch	Conditions are not far from average but there is a potential risk to production
	Poor	Crop conditions are well below average. Crop yields are likely to be 10% or more below
	Average	This is only used when conditions are not likely to be able to recover, and impact on production is likely
Drivers	Wet: Flooding	Wetter than Average due to flooding
	Wet: Water Logging	Wetter than Average due to water logging
	Dry	Dryer than Average
	Hot	Hotter than Average
	Cold	Cooler than average or risk of frost damage
	Extreme Event	This is a catch-all for all other climate risks (i.e. hurricane, typhoon, frost, hail, winterkill, wind damage, etc.)
	Delayed Planting	Postponement to the start of season
	Pests	Destructive insects or animals
	Disease	Impairment of the crop that causes abnormal functioning
	Wind Damage	Damage caused by high winds
	Flood	An excessive amount of water located beyond its normal boundaries
	Socio-political	Social or political factors that impact crop conditions (i.e. policy changes, agricultural subsidies, government intervention, etc.)
Trends	Late Rains	Delayed onset of rainy season
	Improving	Crop conditions are improving
	Stable	Crop conditions are stable
	Worsening	Crop conditions are worsening